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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/700,747	11/20/2000	Benyahia Nasli-Bakir		4239

7590 12/17/2002

Law Office of David J Serbin
1423 Powhatan Street
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Alexandria, VA 22314

EXAMINER

FLETCHER III, WILLIAM P

ART UNIT	PAPER NUMBER
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1762

13

DATE MAILED: 12/17/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/700,747

Applicant(s)

NASLI-BAKIR ET AL.

Examiner

William P. Fletcher III

Art Unit

1762

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 October 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 16-39 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 16-39 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- 1) ☐ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. _____.
 - 3) ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED OFFICE ACTION

I. Response to RCE

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A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the
10 fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 03 October 2002 has been entered as Paper No. 12.

15 II. Response to Amendment

Applicant's amendment in Paper No. 12 added new claim 39. Claims 16 - 39 are now pending.

20 III. Response to Arguments

Applicant has not amended claims 16 - 38. The grounds of rejection set-forth in Paper No. 9 still stand.

IV. Form & Content of Application

Title

5 The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

 The following title is suggested: METHOD OF SEPARATE APPLICATION OF RESIN AND HARDENER COMPONENTS OF AMINO RESIN
10 GLUING SYSTEM.

V. Rejections under 35 U.S.C. § 103

 The following is a quotation of 35 U.S.C. § 103(a) which
15 forms the basis for all obviousness rejections set forth in this Office action:

20 (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.
25

<p>(1) Claims 16, 18, 21, 22, 25 - 27, 29 - 31, 33, and 35 - 39 are rejected under 35 U.S.C. § 103(a) as being unpatentable over</p>
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PERCIWALL {EP 0 016 740 A1} in view of ANDERSSON {EP 0 207 024 A2}.

PERCIWALL teaches a method of applying a gluing system to a
5 substrate, the gluing system having an amino resin component and
an acid hardener component [abstract and p. 4, l. 24 - p. 5, l.
22]. The gluing system is specifically a melamine-formaldehyde
or urea-formaldehyde system used as an adhesive for the joining
of wooden surfaces to form a laminate [p. 1, l. 1 - p. 2, l. 34,
10 for example; p. 4, ll. 24 - 33; and p. 8, ll. 2 - 6]. The acid
hardener may be formic acid [p. 5, l. 1]. The two components are
applied separately to prevent pre-curing and PERCIWALL
specifically teach the desirability of keeping the two components
separate right up to the joining of the two surfaces [p. 1, ll.
15 10 - 34].

PERCIWALL is silent with respect to whether or not the
hardener comprises a filler. PERCIWALL does teach that the
hardener component preferably does not contain any thickening
additives [p. 5, ll. 1 - 22]. It is the examiner's position
20 that, based on these facts, one of ordinary skill in the art
would have reasonably interpreted that hardener component of
PERCIWALL as being free from filler. Please note: a filler

amount of less than a certain % by weight is inclusive of no filler at all.

PERCIWALL does not teach feeding the amino resin and hardener components to at least first and second orifices, respectively, or that the components are discharged through the orifices in the form of strands or as a spray onto the substrate.

ANDERSSON '024 teaches a method of applying a two-component gluing system to a substrate in which the resin component and the hardener component are separately applied to the substrate in the form of separate parallel strands [abstract]. The components are applied through a nozzle (i.e., orifice) [p. 6, ll. 9 - 17]. The two components do not contact each other until the surfaces are joined together [p. 6, ll. 15 - 17].

It would have been obvious to one of ordinary skill in the art to modify the process of PERCIWALL so as to apply the components in the form of separate parallel strands, as taught by ANDERSSON '024. One of ordinary skill in the art would have been motivated to do so by the desire and expectation of preventing pre-curing of the adhesive to the greatest possible extent.

Although ANDERSSON '024 teaches application of the components from a nozzle, the reference does not specify whether it is the same nozzle or two separate, discrete nozzles. Both PERCIWALL and ANDERSSON '024 do teach that pre-curing is

undesirable because it necessitates frequent cleaning of the application apparatus [PERCIWALL: p. 1, ll. 9 - 21 and ANDERSSON '024: p. 1]. Based on this teaching, it would have been obvious to one of ordinary skill in the art to apply each component from its own individual, dedicated nozzle, so as to avoid fouling of the nozzle that would require cleaning.

(2) Claim 16, 18, 21, 22, 25 - 27, 30, 31, 33, and 36 - 39 is rejected under 35 U.S.C. § 103(a) as being unpatentable over ANDERSSON {US 0 207 024 A2} in view of LEHNERT {WO 89/05221}.

The teaching of ANDERSSON '024 is described above. ANDERSSON '024 does not teach that the gluing system is amino resin gluing system, or feeding the amino resin and hardener components to at least first and second orifices, respectively.

The gluing system of ANDERSSON '024 is a formaldehyde based adhesive, preferably resorcinol-formaldehyde or resorcinol-phenolformaldehyde [p. 2, ll. 5 - 11].

LEHNERT teaches the equivalence of phenol and amino resins as conventional two-component adhesives in the art of joining wooden surfaces to form laminates, including condensation products of formaldehyde and urea and/or melamine [p. 1, ll. 28 - 31 and p. 3, l. 37 - p. 4, l. 9].

Based on this teaching of equivalence, it would have been obvious to one of ordinary skill in the art to modify the method of ANDERSSON '024 by substituting, as the gluing system, the amino resin gluing system of LEHNERT. One of ordinary skill
5 would have been motivated to do so by the desire and expectation of successfully joining wooden surfaces to form a laminate.

LEHNERT is silent with respect to whether or not the hardener component includes a filler. Based on this fact, it is the examiner's position that one of ordinary skill in the art
10 would have reasonably interpreted the hardener of LEHNERT as free from filler. Please note: a filler amount of less than a certain % by weight is inclusive of no filler at all.

As noted in rejection (1) above, it would have been obvious to one of ordinary skill in the art to apply each component from
15 its own individual, dedicated nozzle, so as to avoid fouling of the nozzle that would require cleaning.

(3) Claims 16 - 32 are rejected under 35 U.S.C. § 103(a) as being unpatentable over VESTERLUND et al. {US 6,284,090 B1} in
20 view of ANDERSSON {US 4,175,065}.

With respect to claims 16, 25 - 27, and 29 - 32, VESTERLUND et al. teach a gluing system based on at least two components: a

resin component and a hardener component. The hardener component is based on acids like formic acid [c. 1, ll. 22 - 25]. A first fluid component (hardener) is brought to flow in a first stream, and a second fluid component (resin) is brought to flow in a second stream, whereby the flow of the second stream is brought to essentially encircle the flow of the first stream [c. 2, ll. 44 - 57]. VESTERLUND et al. teach that the method is particularly suited for supplying thermosetting resin gluing systems such as melamine-urea-formaldehyde, urea-formaldehyde, and melamine-formaldehyde [c. 1, ll. 15 - 20]. VESTERLUND et al. further teach that the coatings may be applied in a stream, jet, or ray [c. 1, ll. 66 - 67].

VESTERLUND et al. are silent with respect to whether or not the hardener comprises a filler. Based on this fact, it is the examiner's position that one of ordinary skill in the art would have reasonably interpreted the hardener as being free of filler.

ANDERSSON '065 teaches a gluing system based on a liquid resin and a liquid hardener similar to the system taught by VESTERLUND et al. [cc. 1 - 2]. A filler can be mixed into the hardener composition in order to alter the viscosity or increase the volume [c. 4, ll. 55 - 57]. ANDERSSON '065 further teaches

that this filler comprises 0 - 50 wt.-% of the hardener composition [c. 5, ll. 5 - 10].

The filler does not take part in the chemical reaction between the resin and the hardener. It is merely added, as taught by ANDERSSON '065, to control the viscosity and volume of the hardener composition. VESTERLUND et al. does not require any filler at all, and ANDERSSON '065 teaches that fillers may be added to the hardener composition of a two-component gluing system in an amount of from 0 - 50 wt.-%.

Viscosity and volume of a coating composition effect, for instance, the coating characteristics of the composition. Control of such properties would have been well-within the level of skill of a practitioner in the art.

It would have been obvious to one of ordinary skill in the art, at the time the invention was made, to utilize a hardener without a filler, as taught by VESTERLUND et al., or to utilize a hardener comprising a filler the amount of which having been optimized by routine experimentation with appropriate regard to the desired viscosity and volume of the hardener composition - including filler amounts of from 0 - 50 wt.-% as taught by ANDERSSON '065, which range encompasses the ranges claimed by the applicants [*In re Boesch*, 205 USPQ 215 (CCPA 1980); *In re*

Woodruff, 16 USPQ2d 1934, 1936 (Fed. Cir. 1990); and *In re Aller*, 105 USPQ 233 (CCPA 1955)].

With respect to claim 17, VESTERLUND et al. teach that the
5 flow of each or both of the components may be pumped or
propelled by gravitational forces, or a combination thereof, and
that the stream of fluid component may be a stream, jet, or ray.
Therefore, it is the examiner's position that VESTERLUND et al.
suggest applying the resin component in the form of strands and
10 applying the hardener by spraying.

With respect to claims 18 - 20, ANDERSSON '065 teaches
that the components of the gluing system are separately applied
in the form of strands. In c. 5, Example 1, ANDERSSON '065
15 teaches that the later applied strands of the hardener component
substantially overlap the correspondingly previously applied
strands of the resin component. It would have been obvious to
one of ordinary skill in the art, at the time the invention was
made, to have used a bead coater, as taught by ANDERSSON '065,
20 in the method of VESTERLUND et al., as suitable means of
applying the two-component gluing system to the substrate
because VESTERLUND et al. and ANDERSSON '065 teach similar
gluing systems.

With respect to claims 21 and 22, the Examiner acknowledges that neither VESTERLUND et al. nor ANDERSSON '065 teach the layout of the resin and hardener components claimed by the applicants. However, it is the examiner's position that the layout of the components will have an effect on the curing time of the glue system, and that it would have been obvious to one of ordinary skill in the art, at the time the invention was made, to have determined the optimum layout of the resin and hardener components through routine experimentation in the absence of a showing of criticality, including one of the layouts claimed by the applicants.

With respect to claims 23 and 28, VESTERLUND et al. is silent as to the amount of volatile acid present in the hardener composition. It is the examiner's position that the amount of volatile acid in the hardener composition will effect the setting time of the resin component, and will depend on other components present in the hardener composition, the type of volatile acid used in the composition, the type of resin component being used, and the nature of the substrate to which the composition is being applied. It would have been obvious to one of ordinary skill in the art, at the time the invention was

made, to have determined the optimum amount of the volatile acid in the hardener composition through routine experimentation in the absence of a showing of criticality [*In re Boesch*, 205 USPQ 215 (CCPA 1980); *In re Woodruff*, 16 USPQ2d 1934, 1936 (Fed. Cir. 1990); and *In re Aller*, 105 USPQ 233 (CCPA 1955)].

With respect to claim 24, neither VESTERLUND et al. nor ANDERSSON '065 specifically teach the weight ratio of hardener to resin. It is the examiner's position that the weight ratio of hardener to resin will depend on the type of volatile acid and the type of resin that is used, as well as the desired curing time for the composition on the substrate. It would have been obvious to one of ordinary skill in the art, at the time the invention was made, to have determined the optimum weight ratio of hardener to resin by routine experimentation in the absence of a showing of criticality.

(4) Claims 33 - 38 are rejected under 35 U.S.C. § 103(a) as being unpatentable over VESTERLUND et al. {US 6,284,090 B1} in view of ANDERSSON {US 4,175,065}.

With respect to claims 33, 35 - 38, VESTERLUND et al. teach a gluing system based on at least two components: a resin

component and a hardener component. The hardener component is based on acids like formic acid [c. 1, ll. 22 - 25]. A first fluid component (hardener) is brought to flow in a first stream, and a second fluid component (resin) is brought to flow in a second stream, whereby the flow of the second stream is brought to essentially encircle the flow of the first stream [c. 2, ll. 44 - 57]. VESTERLUND et al. teach that the method is particularly suited for supplying thermosetting resin gluing systems such as melamine-urea-formaldehyde, urea-formaldehyde, and melamine-formaldehyde [c. 1, ll. 15 - 20]. VESTERLUND et al. further teach that the coatings may be applied in a stream, jet, or ray [c. 1, ll. 66 - 67].

VESTERLUND et al. are silent with respect to whether or not the hardener comprises a filler. Based on this fact, it is the examiner's position that one of ordinary skill in the art would have reasonably interpreted the hardener as being free of filler.

ANDERSSON '065 teaches a gluing system based on a liquid resin and a liquid hardener similar to the system taught by VESTERLUND et al. [cc. 1 - 2]. A filler can be mixed into the hardener composition in order to alter the viscosity or increase the volume [c. 4, ll. 55 - 57]. ANDERSSON '065 further teaches

that this filler comprises 0 - 50 wt.-% of the hardener composition [c. 5, 11. 5 - 10].

The filler does not take part in the chemical reaction between the resin and the hardener. It is merely added, as taught by ANDERSSON '065, to control the viscosity and volume of the hardener composition. VESTERLUND et al. does not require any filler at all, and ANDERSSON '065 teaches that fillers may be added to the hardener composition of a two-component gluing system in an amount of from 0 - 50 wt.-%.

Viscosity and volume of a coating composition effect, for instance, the coating characteristics of the composition. Control of such properties would have been well-within the level of skill of a practitioner in the art.

It would have been obvious to one of ordinary skill in the art, at the time the invention was made, to utilize a hardener without a filler, as taught by VESTERLUND et al., or to utilize a hardener comprising a filler the amount of which having been optimized by routine experimentation with appropriate regard to the desired viscosity and volume of the hardener composition - including filler amounts of from 0 - 50 wt.-% as taught by ANDERSSON '065, which range encompasses the ranges claimed by the applicants. [*In re Boesch*, 205 USPQ 215 (CCPA 1980); *In re*

Woodruff, 16 USPQ2d 1934, 1936 (Fed. Cir. 1990); and *In re Aller*, 105 USPQ 233 (CCPA 1955)].

With respect to claims 34, VESTERLUND et al. is silent as
5 to the amount of volatile acid present in the hardener
composition. It is the examiner's position that the amount of
volatile acid in the hardener composition will effect the
setting time of the resin component, and will depend on other
components present in the hardener composition, the type of
10 volatile acid used in the composition, the type of resin
component being used, and the nature of the substrate to which
the composition is being applied. It would have been obvious to
one of ordinary skill in the art, at the time the invention was
made, to have determined the optimum amount of the volatile acid
15 in the hardener composition through routine experimentation in
the absence of a showing of criticality [*In re Boesch*, 205 USPQ
215 (CCPA 1980); *In re Woodruff*, 16 USPQ2d 1934, 1936 (Fed. Cir.
1990); and *In re Aller*, 105 USPQ 233 (CCPA 1955)].

20 VI. Pertinent Prior Art

The following prior art references are made of record but have not been applied against the claims. They are considered pertinent to applicant's disclosure.

CREIGHTON, JR., et al. {US 3,323,682} teach the use of a
5 plural chambered cartridge that will dispense either parallel
abutting or parallel, spaced apart streams of the ingredients
contained in the cartridge [c. 4, ll. 53 - 57]. The dispenser
may be used to dispense a two-component adhesive [c. 1, ll. 16 -
40]. The two dispensing spouts are physically separated from
10 each other by an amount which corresponds to the desired stream
separation distance [c. 4, ll. 61 - 64].

COLUMBUS {US 3,782,600} teaches that two-component gluing
systems based on phenolic and urea resins may be applied through
two separate spaced spouts in a co-dispenser applicator [c. 5,
15 ll. 24 - 42].

TOSHIO et al. {JP 61-040137} teach the manufacture of a
laminate by dispensing resin and hardener individually as strips
or threads in a predetermined interval or order [English-language
abstract].

20 KUNISHIGE et al. {US 4,750,963} teach the simultaneous or
sequential application of a two-part adhesive by spraying [c. 3,
ll. 52 - 61].

VESTERLUND {EP 0 550 918 A1} teaches that curing adhesive systems mostly consist of two components, resin and hardener, which can be applied in the form of a premixed composition or added separately and be mixed on the object to be glued [c. 1, 5 11. 9 - 12].

VII. Conclusion

Any inquiry concerning this communication or earlier 10 communications from the examiner should be directed to William P. Fletcher III whose telephone number is (703) 308-7956. The examiner can normally be reached on Monday through Friday, 9 AM to 5 PM.

If attempts to reach the examiner by telephone are 15 unsuccessful, the examiner's supervisor, Shrive P. Beck can be reached on (703) 308-2333. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9310 for regular communications and (703) 872-9311 for After Final communications.

20 Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

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3rd Action

William Phillip Fletcher III
Patent Examiner
United States Patent & Trademark Office
Group Art Unit 1762

wpf

December 11, 2002



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